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A WEEKLY REVIEW OF CANADIAN CLIMATE

CLIMATIC PERSPE

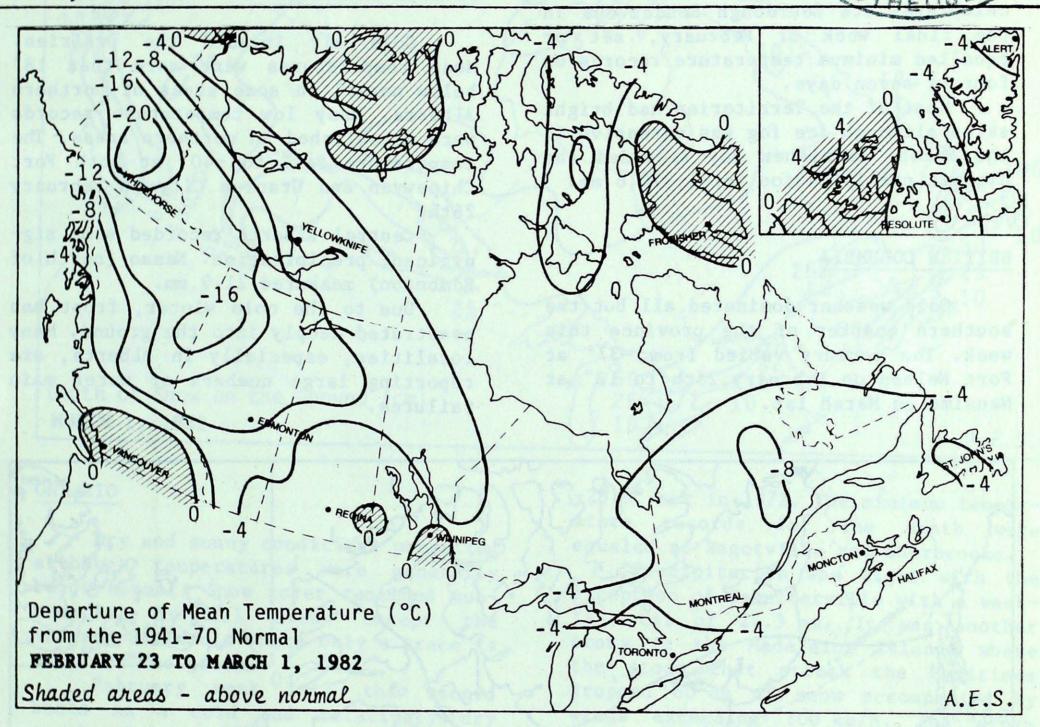
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THE CANADIAN CLIMATE CENTRE, ATMOSPHERIC ENVIRONMENT SERVICE, 4905 DUFFERIN ST., DOWNSVIEW, ONTARIO M3H

MAR 1 0 1982

MARCH 5, 1982

(Aussi disponible en français)



# WEATHER HIGHLIGHTS FOR THE PERIOD - FEBRUARY 23 TO MARCH 1,1982

Storms strike the Atlantic Provinces for third consecutive week

A storm following almost the same track as the storm which sank the Ocean Ranger buffeted many areas with winds of over 100 km/h. The areas hardest hit were Prince Edward Island, the Madeleine Islands and western Newfoundland. Snowdrifts of 5 m to 7 m in height brought western Prince Edward Island to a standstill as even the snowploughs were forced out of service.

The Madeline Islands were paralysed by 60 cm of snow accompanied by winds of over 100 km/h. More than 6000 people were left without heat or telephone service.

Temperatures varied from a maximum of 13° at Nanaimo, B.C. to a minimum of -49° at Pond Inlet, N.W.T. Amphitrite Point, B.C. recorded the highest weekly precipitation total, 243.9 mm.

NOTE: The data shown in this publication are based on unverified reports from approximately 225 Canadian and 115 northern United States Synoptic stations.

# YUKON AND NORTHWEST TERRITORIES

Very cold weather was general over the Mackenzie District Yukon, northern Baffin Island. Pond Inlet recorded a temperature of -49° February 27th. Mean temperatures were more than 20° below normal in central Whitehorse, Yukon. which annually celebrates its Sourdough Rendezvous in the final week of February, set or equalled minimum temperature records on four of seven days.

Most of the Territories had bright skies although ice fog was extensive in the Yukon. Frobisher Bay recorded the highest precipitation total, 10.6 mm.

# BRITISH COLUMBIA

Cold weather dominated all but the southern quarter of the province this week. The mercury varied from -37° at Fort Nelson on February 25th to 13° at Nanaimo on March 1st.

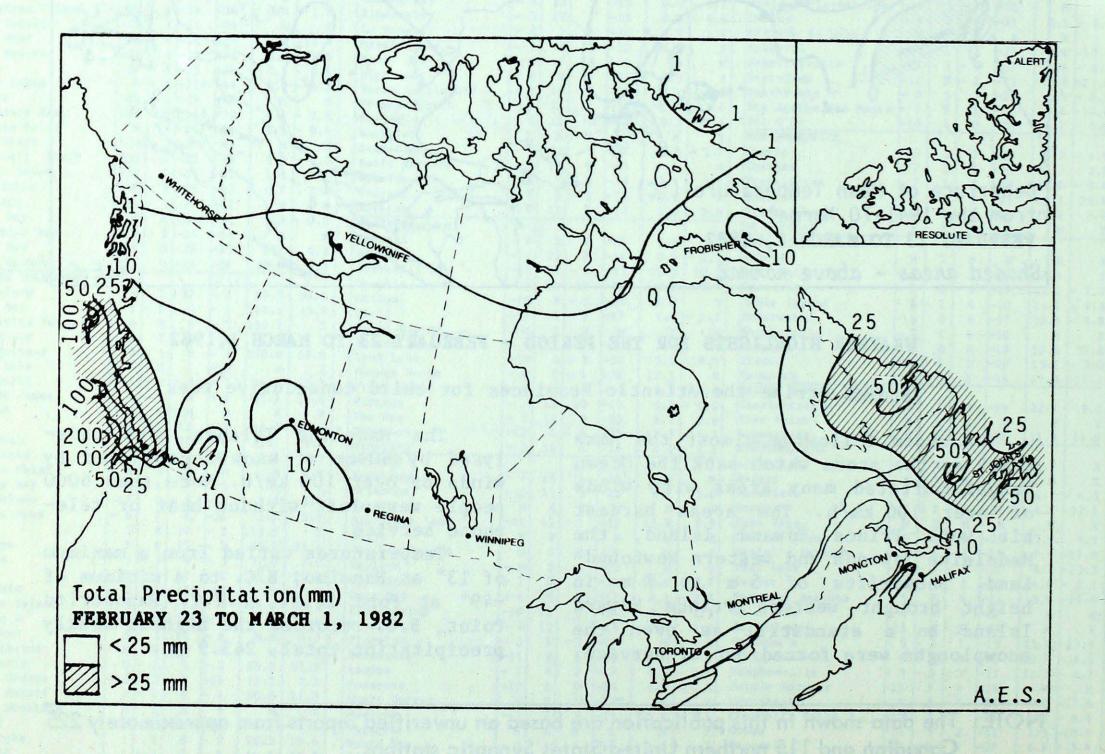
Coastal precipitation was again very high. Amphitrite Point measured 243.9 mm, the third week in which the precipitation total was in excess of 160 mm.

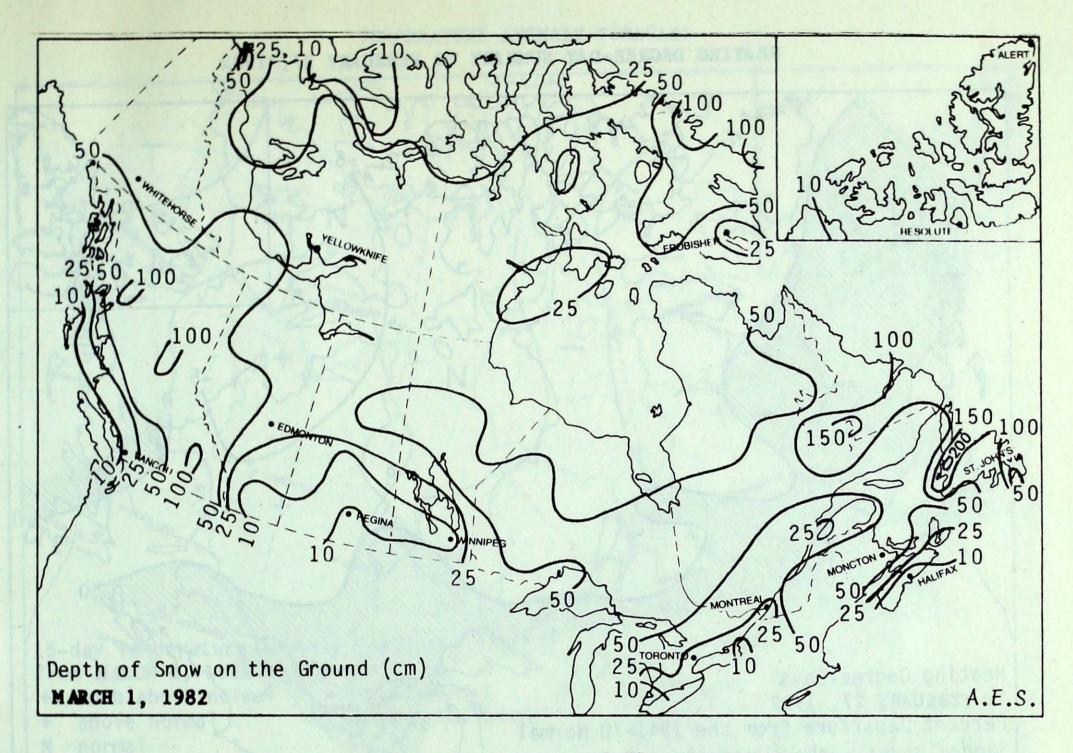
# PRAIRIE PROVINCES

Cold air invaded the prairies. Mean temperatures were more than 18° below normal in some areas of northern Alberta. Many low temperature records were established in northern areas. The temperature fell to -40° at both Fort Chipewyan and Uranium City on February 26th.

Central Alberta recorded some significant precipitation. Namao (north of Edmonton) measured 21.9 mm.

Due to the cold winter, frost has penetrated deeply into the ground. Many localities, especially in Alberta, are reporting large numbers of water main failures.





### ONTARIO

Dry and sunny conditions prevailed although temperatures were generally below normal. Snow cover remained substantial in all areas except the Niagara Peninsula where only a trace is still on the ground.

February went into the record books as a cold and relatively dry month. Although snowfalls were generally significant, there was almost a complete absence of rain causing total precipitation amounts to be much below normal.

For the winter season to date, Toronto has received 123 cm of snow, only 14 cm more than that of a normal winter to the end of February.

## QUEBEC

The cold weather covering Québec this week set 35 daily temperature records. The minimum of -31° registered at Roberval on March 1st eclipsed the old record monthly minimum of

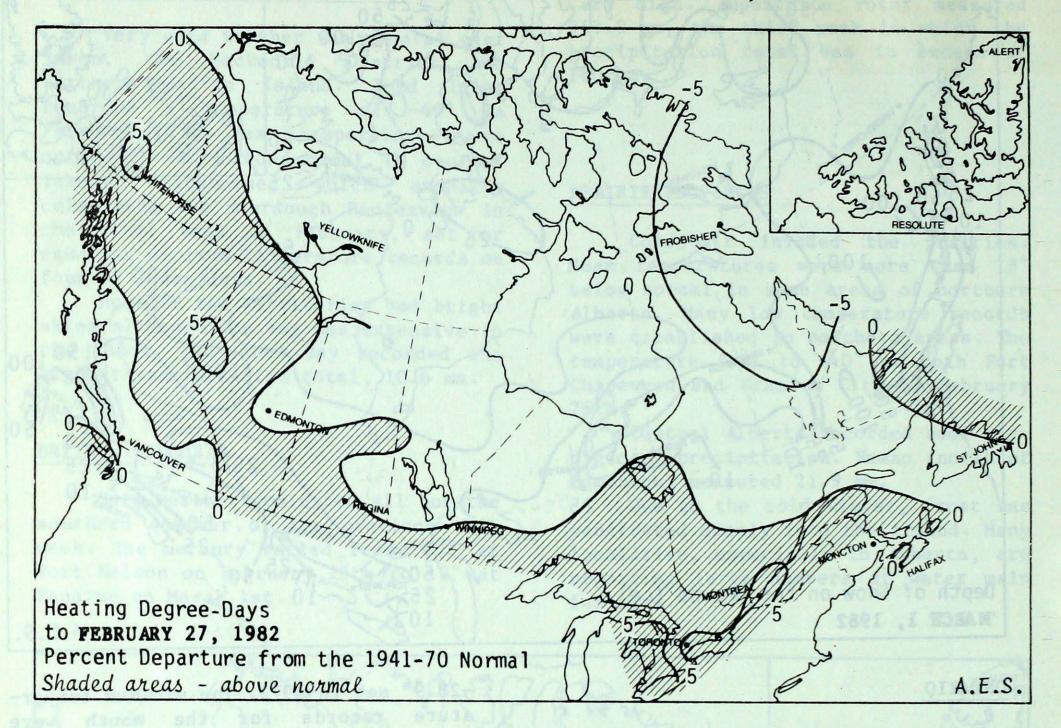
-28.9° set in 1972. The minimum temperature records for the month were equaled at Bagotville and Sherbrooke.

Precipitation was light with the exception of Schefferville with a weekly total of 21.3 mm. It was another story in the Madeleine Islands where the storm that struck the Maritimes dropped 60 cm of snow accompanied by winds exceeding 100 km/h. The storm completely paralysed the Islands. More than 6000 people were left without heat or telephone service and an emergency supply of food and supplies was desperately needed.

# ATLANTIC PROVINCES

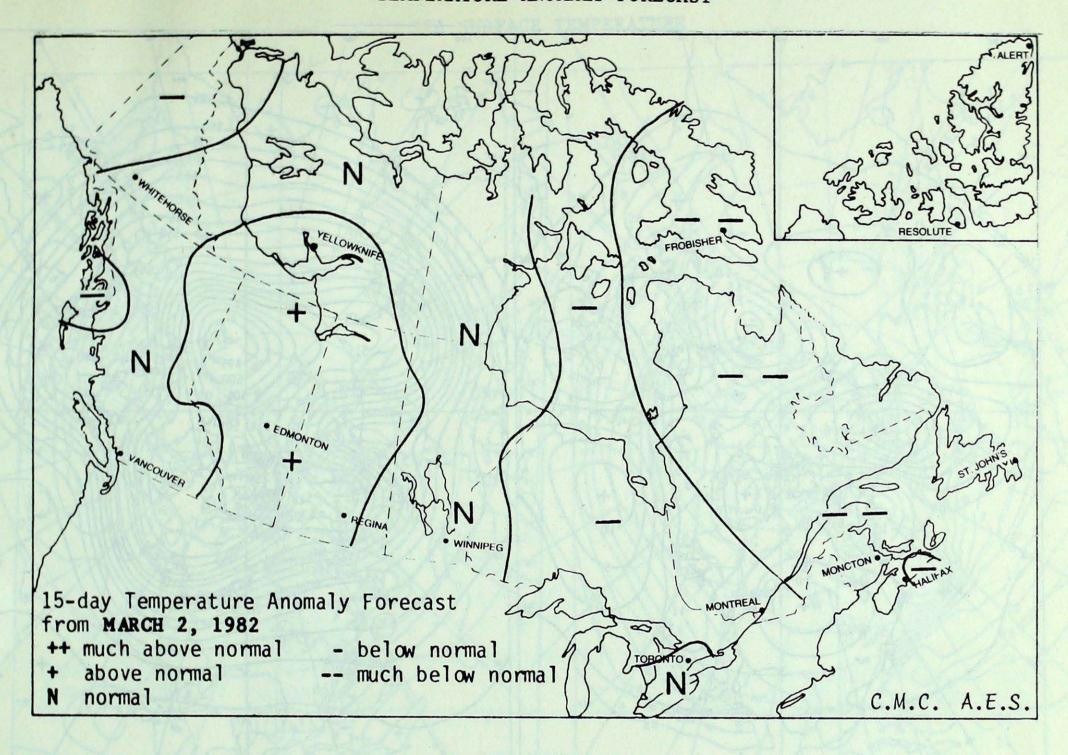
The Atlantic Provinces were struck by a major storm which followed almost the same track as the storm that sank the Ocean Ranger. Wind gusts of 130 km/h were measured along the Newfoundland coast. The troller Dolores Genda sank 160 km northeast of Cartwright on February 24th, but all crew members were rescued.

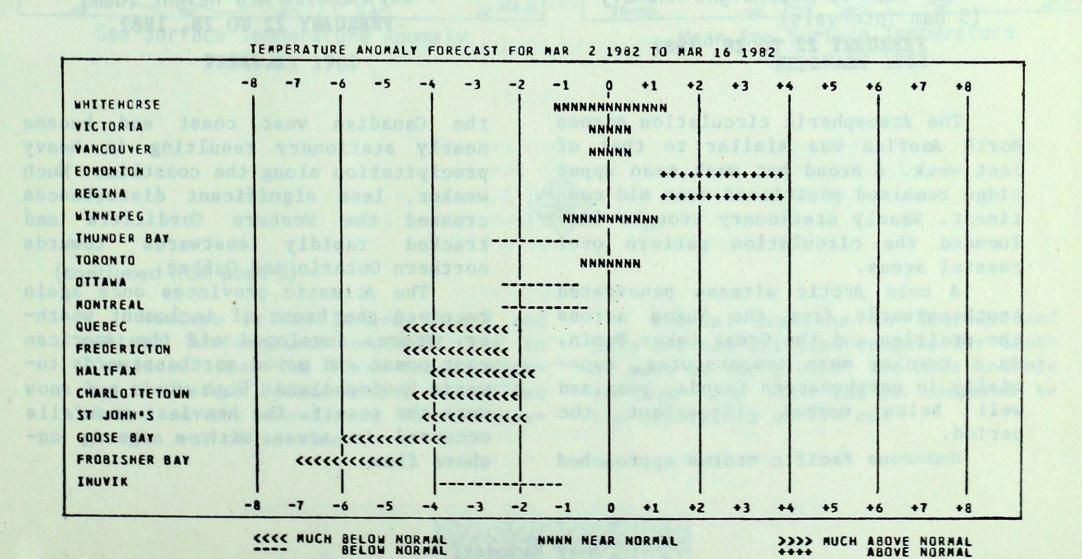
# HEATING DEGREE-DAY SUMMARY TO FEBRUARY 27, 1982



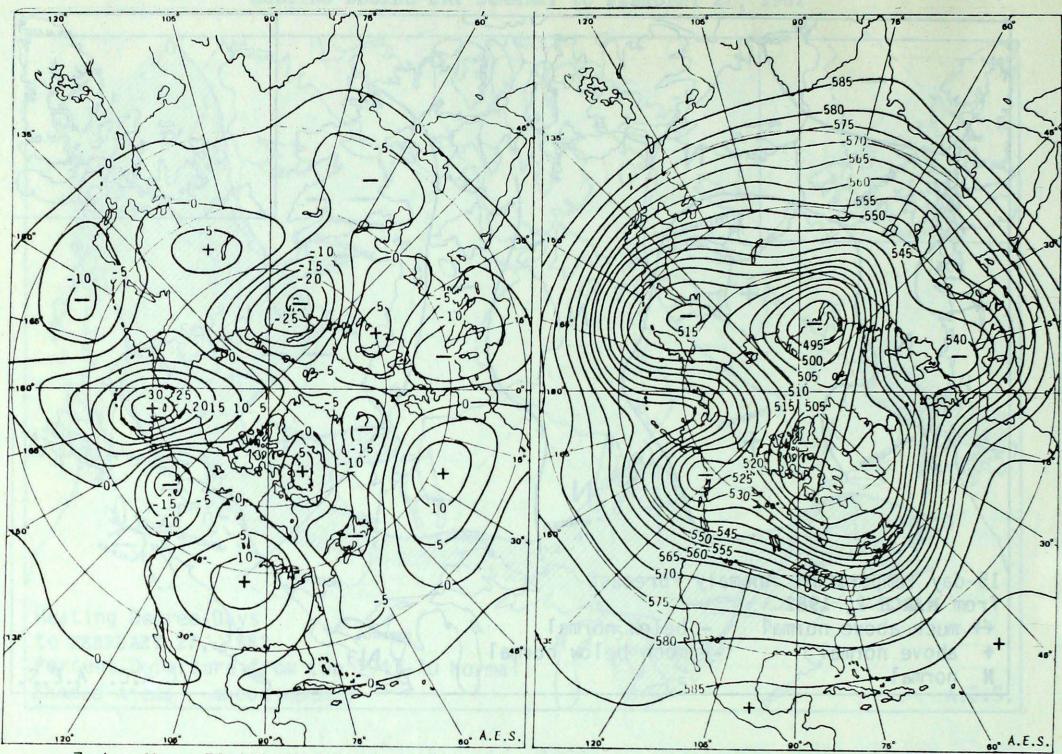
STATION	MONTHLY CUMULATIVE TOTAL	MONTHLY DIFF. FROM 1941-70 NORMAL	SE ASONAL TOT AL	SEASONAL DIFF. FROM 1941-70 NORMAL	SEASONAL PERCENT OF NORMAL
		BASILEY TEXTS		A Sense ent	
Resolute	1395.0	-10.0	7930.5	-370.5	96
Inuvik	1132.5	-159.5	6806.0	-209.0	97
Whitehorse	963.0	111.0	5348.5	348.5	107
Vancouver	376.0	6.0	2041.0	-45.0	98
Edmonton Mun	855.5	77.5	4048.0	-34.0	99
Calgary	784.0	89.0	3920.5	148.5	104
Regina	966.5	12.5	4762.0	-11.0	100
Winnipeg	883.5	-37.5	4285.0	-9.0	100
Thunder Bay	870.5	22.5	4193.5	126.5	103
Windsor	666.0	80.0	2856.0	271.0	110
Toronto	689.5	41.5	3154.5	265.5	109
Ottawa	734.5	-16.5	3531.5	135.5	104
Montreal	736.5	3.5	3482.0	246.0	108
Quebec	799.0	15.0	3781.0	168.0	105
Saint John, N.B.	710.5	13.5	3329.0	90.0	103
Halifax	616.0	9.0	2757.5	67.5	103
Charlottetown	703.5	13.5	3083.5	29.5	101
St. John's, Nfld.	670.5	62.5	3027.5	1.5	100
	TRATES DE SE	STAN FOR		COTAN LAVO	

# TEMPERATURE ANOMALY FORECAST





# Atmospheric Circulation



7-day Mean 50 kPa Height Anomaly (5 dam intervals)

FEBRUARY 22 TO 28, 1982

7-day Mean 50 kPa Height (dam) **FEBRUARY 22 TO 28, 1982** 

The Atmospheric circulation across North America was similar to that of last week. A broad but weak mean upper ridge remained positioned over mid continent. Nearly stationary troughs influenced the circulation pattern over coastal areas.

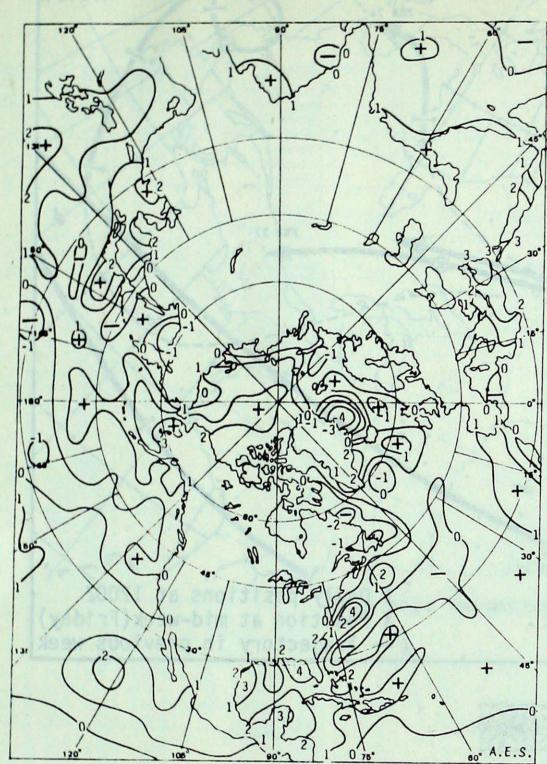
A cold Arctic airmass penetrated southeastwards from the Yukon across the prairies and the Great Lakes Basin. As a result, mean temperatures, especially in northwestern Canada, remained well below normal throughout the period.

Numerous Pacific storms approached

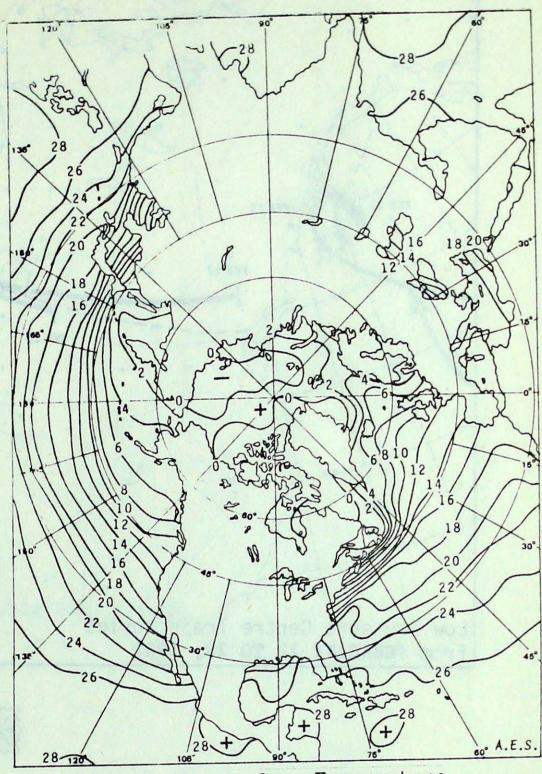
the Canadian west coast and became nearly stationary resulting in heavy precipitation along the coastline. Much weaker, less significant disturbances crossed the Western Cordillera and tracked rapidly eastwards towards northern Ontario and Québec.

The Atlantic provinces once again received the brunt of inclement weather. Storms developed off the American east coast and moved northeastwards towards Newfoundland. High winds and snow were the result. The heaviest snowfalls occurred in areas with a strong onshore flow.

# SEA SURFACE TEMPERATURE



Sea Surface Temperature Anomaly
FEBRUARY 1982



Mean Sea Surface Temperature
FEBRUARY 1982



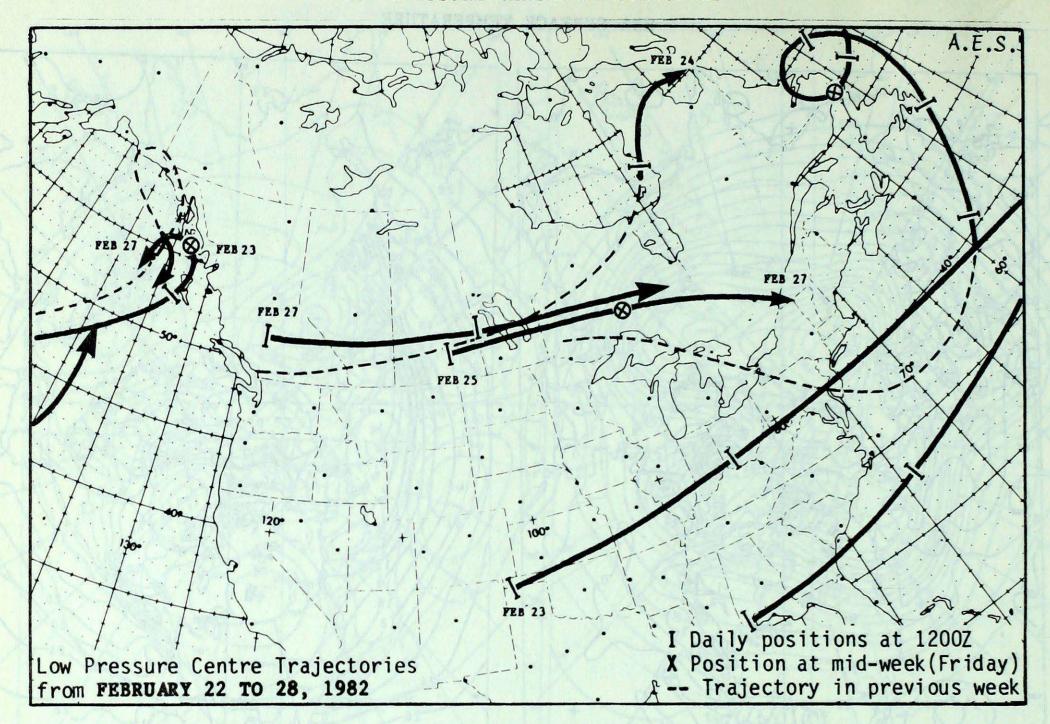
# (contiuned from page 3)

Western Prince Edward Island and western Newfoundland recorded 5 m to 7 m snowdrifts. The Trans Canada Highway in western Prince Edward Island was closed as the snowdrifts forced snow-ploughs out of service.

Several stations in Newfoundland have set new all time records for depth of snow on the ground. The most notable is Deer Lake with 228 cm compared to the old record of 173 cm.



#### LOW PRESSURE CENTRE TRAJECTORIES





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TEMPERATURE AND PRECIPITA								
	T	empe	rature	(°C)	Prec	Precip. (mm)		
Station	Average	Departure from Normal	Extreme	Extreme	Total	Departure from Normal		
YUKON Burwash Dawson Faro Komakuk Beach Mayo A	-31 -36 M -22 -36	X 1	-18 -21 M - 9	-46 -46 M -36 -48	1.8 0.0 M 0.0	0.2 - 3.7 X - 0.9 - 2.9		
Shingle Point Teslin Watson Lake Whitehorse NORTHWEST TERRITORIE	-22 M -29 -29	1 X	-12 -11P -17 -20	-29 -33P -42 -40	0.0 M M	- 1.2 X M - 3.6		
Cape Parry Cape Young Clinton Point Contwoyto Lake Coppermine Fort Reliance Fort Simpson Fort Smith Hay River Inuvik Lady Franklin Point Nicholson Peninsula Norman Wells Port Radium Robertson Lake Tuktoyaktuk Yellowknife Baker Lake Coral Harbour Ennadai Lake Jenny Lind Island Pelly Bay Rankin Inlet Shepherd Bay Alert Broughton Island Cape Dorset Cape Dyer Cape Hooper Clyde Dewar Lakes Eureka Frobisher Bay Gladman Point Hall Beach Longstaff Bluff Mackar Inlet Pond Inlet	-29 -29 -25 M -29 -31 -28 -27 -27 -29 -27 -30 M M -27 -29 -33 -33 M M -35 M -37 -24 -26 -20 -26 -28 -27 -28 -28 -27 -29 -33 -33 -33 -34 -35 -37 -37 -24 -26 -26 -27 -28 -28 -27 -30 -30 -30 -30 -30 -30 -30 -30	1 M 1 1 6 -13 - 8 8 - 3 - 1 - 3 - 7 X X 2 - 7 - 3 6 M M X M - 3 - 1 X 2 - 1 1 - 4 3 M - 9 - 1 M		-36 -37 -32 M -37 -39 -41 -39 -37 -38 -43 -40 -49 -42 -27 -32 -31 -30 -47 -33 -41 -37 -38 -40 -41 -39 -42 -42 -37 -38 -40 -41 -40 -41 -40 -40 -40 -40 -40 -40 -40 -40	M M M M M M M M M M M M M M M M M M M	M M M M M M M M M M M M M M M M M M M		
Pond Inlet Resolute Byron Bay Cambridge Bay Mould Bay Sachs Harbour BRITISH COLUMBIA Abbotsford Alert Bay Amphitrite Point	-39 -36 -31 -32 -31 -30 4 3	- 3 0 2 4	-27 -20 -20	-41 -37 -39 -41 -38	0.0 0.0 1.4 M 1.4 86.0 82.7 243.9	X - 0.9 - 1.5 0.3 M 0.6 54.7 59.2 X		
Amphitrite Point Blue River Rull Harbour Burns Lake Cape Scott Cape St James Clinton Comox Cranbrook Dease Lake Estevan Point Ethelda Bay Fort Nelson Fort St John Hope Kamloops Langara Lytton Mackenzie McInnes Island Nanaimo A Penticton Port Alberni Port Hardy Prince George Prince Rupert Puntzi Mountain Quesnel Revelstoke Sandapit	5 M 3 -13 3 4 M 5 - 2 -22 M 0 -25 -24 4 2 1 3 M 2 4 2 M 3 -14 1 M -12 - 1 1	X - 1 X - 2 O X 1 O -14 M X -13	M 9 - 3 9 10 M 10 6	M - 3 -21 - 1 0 M - 2 -13 -32 M - 3 -37 -30 - 3 - 8 - 3 - 4 -30P - 1 - 3 - 7 M - 4 -28 - 6 M -26 - 7	M 105.7 H	73.5 X 110.4 41.8 X M 2.6 - 2.2 M X 2.4 10.9 X 0.3 14.6 -10.6 X 50.4 X 11.4 X 51.5 18.4 -38.2 X 10.1 13.0 83.8		

AR CILLANSUS	Te	7	alure	Prec	Precip. (mm)		
Station	Average	Departure from Norma	Extre	Extreme	Action essentia	Departure from Normal	
Smithers * Stewart	-11 - 5	- 7 X	3	-20 -14	13.5 M	8.8 X	
Terrace Vancouver	- 6 5	- 6	12	-11	10.4	10.1	
Victoria	5	0	11	- 2	23.9	3.8	
Williams Lake ALBERTA	- 6	- 3	4	-22	2.9	- 3.0	
Banff Calgary	-18 -15	- 1 - 8	5	-17 -24	6.2	- 0.6	
Cold Lake	-18	- 7	- 9	-27	M	M	
Coronation Edmonton Intl	-18 -20	- 7 -11	- 9 - 8	-29 -29	12.0	5.9	
Edmonton Namao	-19 -21	-11 -10	- 8 -11	-28 -31	21.9	17.9	
Fort Chipewyan	-28	-11	-15	-40	H	н	
Fort McMurray Grande Prairie	-22 -23	- 9	-13 -16	-31 -31	9.4	3.8	
High Level	-26	-18	-17	-39	8.0	7.1	
Jasper Lac La Biche	-16 M	-10 X	- 6 M	-24 M	5.4 M	- 0.5 X	
Lethbridge Medicine Hat	-10 -12	- 5	7 2	-17 -23	3.5 M	- 4.1 M	
Peace River	-24	-14	-17	-32	8.9	4.9	
Red Deer Rocky Mountain House	-17 -18	- 7 -12	- 6 - 6	-27 -29	9.9	3.6	
Slave Lake Vermilion	-22	-10	-13	-35	5.2	0.6	
Whitecourt	-18 -20	- 6 -12	- 9 -11	-27 -28	5.9	3.0 7.8	
S ASK ATCHEW AN Broadview	-13	x	- 6	-20	м	x	
Buffalo Narrows Collins Bay	-22 -25	- 8	-13	-35	M	M X	
Cree Lake	-23	X	-16 -14	-33 -36	3.4 M	X	
Eastend Cypress Estevan	-13	- 3	M - 5	-21	M	X	
Hudson Bay	-17	- 3	- 7	-25	М	H	
Kindersley La Ronge	-16 -22	- 5 - 7	- 4 -13	-26 -34	10.5	6.3	
Meadow Lake Moose Jaw	-20 -12	- X	-11 - 3	-34 -19	10.9	7.0	
Nipawin	-18	X	-11	-26	1.8	X	
North Battleford Prince Albert	-16 -16	- 4	- 8 - 7	-25 -25	3.9	0.3	
Regina Rockglen	-13 M	- 1 X	- 5 M	-20 M	5.8 M	0.1 X	
Saskatoon	-14	- 1	- 7	-23	1.4	- 3.4	
Swift Current Uranium City	-12 -27	- 2 - 7	- 1 -15	-18 -40	2.1	- 0.8	
ynyard Yorkton	-14 -13	X O	- 6 - 6	-20 -19	3.6 M	X M	
MANITOBA							
Bissett Brandon	-16 -12	X 1	- 3 - 5	-31 -19	7.6	- 6.9	
Churchill Churchill	-26 -15	- 2	-14 - 5	-34 -24	M 4.2	- 0.1	
Dauphin Gillam	-24	X	-12	-33	4.4	х	
Gimli Grand Rapids	-15 M	- 1 X	- 3 M	-24 M	6.0 M	0.1 X	
Island Lake Lynn Lake	-20 -25	X - 6	- 8	-34 -35	M 3.8	2.0	
Norway House	-21	X	-10	-35	12.0	X	
Pilot Mound Portage	-13 -12	0		-20 -20	2.5	- 4.5	
he Pas	-20 -22	- 4	- 8	-32 -34	4.3	0.2 5.7	
Thompson Vinnipeg	-13	0	2	-22	4.4	- 0.5	
NT ARIO	-18	- 2	- 6	-37	м	м	
At 1 kokan	-14	- 2 X		-31	4.8	- 3.2	
arrie lig Trout Lake	-22	- 3	8	-34	M 5.4	0.5	
ritt Caribou Island	M	X	M	M	M	X	
arlton	-16	- 4  -	1	-31	M	М	
eraldton ore Bay	-18 -11	- 3	1	-34 -24	3.5	- 7.4	
apuskasing enora	-17 -14	- 4 -	3	-31 -24	7.8	- 4.8	
ingston	- 8	- 3	4	-17	M	M	
ansdowne ondon	-20 - 8	- 3 -	2	-31 -20	0.8	- 3.1	
oosonee ount Forest	-22	6 -	5	-35	3.6	7.0	
luskoka	-11	- 4	3	-27	M	М	
agagami orth Bay	M -13	X -	H 1	M 24	M 15.7	- 0.2	
ttawa	-12	. 5	475	20	5.4	10.2	

	Te	Temperature (°C)				Precip. (m		
(Station)	Average	Departure, from Normal	Extreme	Extreme	Torol	Deporture from No.		
Petawawa Pickle Lake Red Lake Simcoe Sioux Lookout Sudbury Thunder Bay Timmins Toronto Trenton Upsala Wawa Wiarton Windsor	-14 -19 -17 M -17 -13 -12 -16 - 7 - 8 M -15 - 9	- 3 - 4 - 2 - 3 - 3	1 - 7 - 5 3P - 4 - 1 - 3 - 2 2 4 M - 2 2 5	-29 -31 -33 -18P -31 -27 -26 -29 -18 -17 M -30 -20 -15	8.3 5.6 4.8 8.2 0.2 0.3 M 6.1 6.9	- 1.1 1.3 -10.1 - 2.6 - 4.2 -14.5 -17.8		
QUEBEC Bagotville Baie Comeau Blanc Sablon Border Chevery Chibougamau Gaspé Grindstone Island Inoucdjouac Kuujjuaq Lac Eon Grande Riviere	-20 -18 -15 M H -23 -14 -12 -26 -23 H -27	- 9 - 7 - 4 M X X - 6 - 2 - 1	- 6 - 4 0 M - 6 - 5 - 3 -11 - 6 M - 8	-32 -29 -24. M M -33 -22 -18 -36 -30 M -36	7.0 3.7 42.6 M 4.6 5.5 11.7 '4 9.8 M 4.2	- 9.2 - 7.3 - 5.4 21.1 M X X X 7.9 M 4.7 X		
Maniwaki Matagami Mont-Joli Montréal Natashquan Nitchequon Parent Port Menier Poste-de-la-Baleine Québec Rivière du Loup Roberval Schefferville	-17 -20 -16 -13 -16 -27 M H -16 M -19 -25	- 8 x - 7 - 7 - 8 x M - 8 M - 8	- 2 - 4 - 6 - 3 - 6 - 8 M H - 6 - 2 M - 2	-29 -35 -23 -20 -24 -39 M -40P -28 M -31	8.2 M 3.6 1.2 M 7.4 M M M 3.8 M 2.4 21.3 8.2	- 3.5 x -13.4 -14.3 M 2.0 X M -14.1 M -7.8 15.0 -14.7		
Sept-Iles Sherbrooke Ste Agathe des Monts Val D'Or NEW BRUNSWICK Charlo Chatham Fredericton Moncton Saint John St Stephen NOVA SCOTIA	-14	- 6 - 7 - 8 - 6 - 6	- 7 - 3 - 4 - 2 - 6 - 3 - 2 - 3 - 4 M	-27 -33 -28 -32 -24 -26 -29 -25 -24 M	8.6 8.5 8.2 8.0 2.4	- 5.3 -10.9 - 8.7 - 4.8 -23.8 -20.6 -29.6 -31.5		
Amherst Eddy Point Greenwood Sable Island Shearwater Shelburne Sydney Truro Yarmouth PRINCE EDW ARD ISLAND	M -12 -11 - 6 - 9 -12 -11 - 7 -13	X X - 7 - 5 - 6 X - 7 - 4 - 5	M - 1 - 1 2 0 0 - 1 - 2 1 - 3	M -18 -25 -12 -19 -24 -18 -20 -15	1.0 M	-27.4 M-35.0 X-16.5 -23.6 M23.9		
Deer Lake Gander Port aux Basques Et Albans Et Anthony	M -13 -10 -13 -13 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -15 -10 -10 -10 -15 -10 -10 -10 -15 -10 -10 -10 -15 -10 -10 -10 -10 -10 -10 -10 -10 -10 -10	X - 7 - X X X - 5 - 5 - X - 6 - 7 - 4 - 7 - 4 - 4 X - 6	M 2 - 1 M 1 0 0 1 0 1 0 1 0 1	H -21 -16 M -17 -18 M -24 -23 -28 -22 -15 -20 -24 -19	K K	X X X X-10.2 3.4 - 0.5 29.1 M - 4.1 1.9 M X 6.5		
t Lawrence tephenville attle Harbour artwright hurchill Falls oose opedale	- 8 - -12 - -13 - -14 - -24 - -18 - -16 - -25 -	- 4 - 7 - 3 - 3 - 6 - 5 - 1 - 6	1 0 - 1 - 8 - 6 5	-17 -20 -24 -27 -33 -27 -26	74.8 67.2 47.0 M 42.4 57.0 40.3	51.1 51.7 36.3 M 34.1 43.2 28.8		